

Program Requirements Document Companywide	<b>9.1 CONTROL OF SPECIAL PROCESSES</b>	Identifier: PRD-5080 Revision: 3 Page: 1 of 5
Document Control Center: (208) 526-1202	Document Owner: Director, Quality Assurance	Effective Date: 03/06/02

Manual: 13A—Quality and Requirements  
Management Program Documents

Change Number: 88149

## 1. PURPOSE

This Program Requirements Document (PRD) identifies requirements and responsibilities for controlling *special processes* (see def.) which affect the quality of *items* (see def.) and *services* (see def.). See Appendix A for requirements basis.

## 2. APPLICABILITY

This PRD applies to company organizations performing special processes for product *acceptance* (see def.) or continued service. These include processes such as welding, heat treating, brazing, chemical cleaning, soldering, bonding, and nondestructive examination.

## 3. RESPONSIBILITIES

### 3.1 Performing Organization

The organizations that perform special processes are responsible for ensuring that the requirements of this PRD are carried out through the use of implementing *procedures* (see def.) for the special processes being performed.

### 3.2 Technical Support Organization

The *technical support organization* (see def.) is responsible for ensuring that specific procedures or instructions for special processes are developed, reviewed, and approved by qualified personnel as required by applicable codes and standards.

### 3.3 Cognizant Quality Engineer

The *cognizant quality engineer* (see def.) is responsible for reviewing special process procedures and work control documents that specify use of special processes to ensure that:

- A. Applicable quality *inspection* (see def.) points, as well as *qualification* (see def.)/certification requirements (for special process procedures, equipment, and personnel), are incorporated.
- B. Inspections are performed, as required.

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## 4. REQUIREMENT

### 4.1 Companywide Applications

The requirements identified in this subsection (4.1) apply to the entire company unless exempted by INT-17, QA PRD Introduction, Subsection 2.

#### 4.1.1 Basic

- 4.1.1.1 Special processes that control or *verify* (see def.) quality, such as those used in welding, weld overlay, heat treating, chemical cleaning, and nondestructive examination, shall be performed by qualified personnel using qualified procedures in accordance with specified requirements. *[NQA-1-1997, Requirement 9, 100]*
- 4.1.1.2 Special processes shall be controlled by instructions, procedures, drawings, checklists, travelers, or other appropriate means. *[NQA-1-1997, Requirement 9, 201 1s]*
- 4.1.1.3 Special process instructions shall include or reference procedure, personnel, and equipment qualification requirements and *traceability* (see def.) between the item or product and the individual performing the special process. *[NQA-1-1997, Requirement 9, 201 2s; DOE/RW-0333P 9.2.2.B.2s]*
- 4.1.1.4 Conditions necessary for accomplishment of the process shall likewise be included or referenced in special process instructions. These conditions shall include proper equipment, controlled parameters of the process, specified environment, and *calibration* (see def.) requirements. *[NQA-1-1997, Requirement 9, 201 3s and 201 4s; DOE/RW-0333P 9.2.2.1s, 9.2.2.2s and 9.2.2.B]*
- 4.1.1.5 The requirements of applicable codes and standards, including *acceptance criteria* (see def.) for the process, shall be specified or referenced in procedures or instructions. *[NQA-1-1997, Requirement 9, 202; DOE/RW-0333P 9.2.2.C]*
- 4.1.1.6 For special processes not covered by existing codes and standards or where quality requirements specified exceed those of existing codes or standards, the necessary requirements for qualification of personnel, procedures, or equipment shall be specified or referenced in procedures or instructions. *[NQA-1-1997, Requirement 9, 203; DOE/RW-0333P 9.2.2.A]*

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- 4.1.1.7 The organization performing the special process shall adhere to the approved procedures or processes. *[NQA-1-1997, Requirement 9, 300]*
- 4.1.1.8 Nondestructive examination shall include radiography, magnetic particle, ultrasonic, liquid penetrant, eddy current, neutron radiography, and leak testing. *[DOE/RW-0333P 9.2.3.A]*
- 4.1.1.9 The affected organization shall establish implementing documents for the control and administration for the *training* (see def.), examination, and *certification* (see def.) of nondestructive examination personnel. *[DOE/RW-0333P 9.2.3.C]*

#### **4.1.2 Records**

- 4.1.2.1 Records shall be maintained as appropriate for the currently qualified personnel, processes, and equipment of each special process. *[NQA-1-1997, Requirement 9, 400]*
- 4.1.2.2 Special process implementing documents shall include or reference the conditions necessary for accomplishing the special process including traceability between the item or product and the individual performing the special process. *[DOE/RW-0333P 9.2.2.B.1s and 9.2.2.B.2s]*
- 4.1.2.3 All records designated in implementing documents as *quality assurance records* (see def.) shall be controlled in accordance with PRD-5088, 17.1 Quality Assurance Records. *[Summary of records requirements from NQA-1-1997, DOE/RW-0333P, and Company Imposed Requirements]*

#### **4.2 Specific Requirements for DOE/RW-0333P QARD Revision 10 Applications**

This subsection (4.2) contains additional requirements from the QARD (DOE/RW-0333P, Revision 10) that are specific to the Spent Nuclear Fuel Program.

##### **4.2.1 Basic**

- 4.2.1.1 A list of the special processes that each *affected organization* (see def.) will perform, or be responsible for performing, shall be established and maintained. *[DOE/RW-0333P 9.2.1.C]*

##### **4.2.2 Nondestructive Examinations**

- 4.2.2.1 Personnel that perform nondestructive examinations shall be qualified in accordance with the American Society for

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Nondestructive Testing Recommended Practice No. SNT-TC-1A,  
June 1980 Edition. [DOE/RW-0333P 9.2.3.B.1s]

## 5. DEFINITIONS

Refer to LST-199, Definitions, in the QA PRD Manual for the definitions of the following terms:

*acceptance*

*acceptance criteria*

*affected organization*

*calibration*

*certification*

*cognizant quality engineer*

*inspection*

*item*

*procedure*

*qualification*

*quality assurance record*

*service*

*special process*

*technical support organization*

*traceability*

*training*

*verify*

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## **6. REFERENCES**

ASME NQA-1-1997, Quality Assurance Requirements for Nuclear Facility Applications

DOE/RW-0333P, Office of Civilian Radioactive Waste Management, Quality Assurance Requirements and Description, Revision 10

## **7. APPENDICES**

Appendix A, 9.1 Basis

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## APPENDIX A

### 9.1 Basis

Source	Citation	Requirement	Comments
ASME NQA-1-1997, Quality Assurance Requirements for Nuclear Facility Applications, Requirement 9	100	4.1.1.1	Consensus Requirement (CR)
NQA-1-1997, Requirement 9	201 1s	4.1.1.2	CR
NQA-1-1997, Requirement 9	201 2s	4.1.1.3	CR
NQA-1-1997, Requirement 9	201 3s and 201 4s	4.1.1.4	CR
NQA-1-1997, Requirement 9	202	4.1.1.5	CR
NQA-1-1997, Requirement 9	203	4.1.1.6	CR
NQA-1-1997, Requirement 9	300	4.1.1.7	CR
NQA-1-1997, Requirement 9	400	4.1.2.1	CR
DOE/RW-0333P	9.2.1.C	4.2.1.1	Specific Requirement (SR)
DOE/RW-0333P	9.2.2.A	4.1.1.6	CR
DOE/RW-0333P	9.2.2.C	4.1.1.5	CR
DOE/RW-0333P	9.2.2.b.1s and 9.2.2.B.2s	4.1.2.2	CR
DOE/RW-0333P	9.2.3.A	4.1.1.8	CR
DOE/RW-0333P	9.2.3.B.1s	4.2.2.1	SR
DOE/RW-0333P	9.2.3.C	4.1.1.9	C
DOE/RW-0333P, Office of Civilian Radioactive Waste Management Program, Quality Assurance Requirements and Description, Revision 10	9.2.2.1s, 9.2.2.2s and 9.2.2.B	4.1.1.4	CR
PRD-5088, 17.1 Quality Assurance Records	All	4.1.2.3	Summary of records requirements from NQA-1-1997, DOE/RW-0333P, and Company Imposed Requirements